had become extinct in the northern states. No evidences to sustain this view have been produced and none at present can be offered, except that Florida possesses a climate more favorable for animal life. Is there any truth in this notion?

The writer has collected lists of the mammals that existed in early historic days in three states, Florida, Illinois and the mountain region of Colorado. Florida possesses 58,685 square miles of territory, Illinois 56,000, the mountainous region of Colorado approximately 65,000. From reliable authorities it is learned that Florida harbors 65 species and subspecies, Illinois 60 species and subspecies, and the mountain region of Colorado 110 forms. If we proportion the species in each region to areas of the same size, that of Illinois, 56,000 square miles, we shall have for Illinois 60 species and subspecies, for Florida 63, and for Colorado 94.

We see therefore that in number of mammalian forms Florida stands only a little ahead of Illinois and far behind the mountain region of Colorado. Nor is it probable that any one will contend that the mammals of Florida are superior in size, structure, or intelligence, to those of the more northern regions.

The fossil mammals of the Villafranchian group in Italy are of about the same age as those of our Aftonian stage. They include the genera *Felis, Machairodus, Hyaena, Bos, Cervus, Tapirus, Equus,* and two species of primitive elephants. Italy must have always had a milder climate than the lands to the north. Why should not those who argue for a late age of the mammals of the Melbourne beds insist on the same age for the deposits of Val d'Arno? The motive furnished by human remains is apparently wanting.

PALEONTOLOGY.—*New species of fossil decapod crustaceans from California.*[1]

MARY J. RATHBUN, U. S. National Museum

Through Leo G. Hertlein, Department of Paleontology, California Academy of Sciences, fossil specimens of a crab and a shrimp new to science were sent to the U. S. National Museum for identification and description.

Nephrops shastensis, sp. nov.

TYPE: From 2 miles north of Bella Vista, Shasta County, California; Chico, upper Cretaceous; G. D. Hanna and F. M. Anderson collectors, April, 1928. Body and one cheliped exposed (see fig. 1, page 471). Specimen in California Academy of Sciences. The fossil occurred in a bed of earthy shale

[1] Received November 7, 1929.

about 300 feet thick, dipping south 10°. This overlies a zone of sandstone 520 feet thick with same dip and strike and this in turn lies on Triassic slates striking N.W.—S.W. with a dip S.E. of 75°–85°.

MEASUREMENTS: Length of carapace to end of rostrum 33.5, length of rostrum from tip to posterior curve of orbit 9, greatest height of carapace 15, approximate length of cheliped 72, length of chela 46, greatest width of chela, across fingers 9.6, length of dactylus along inner margin 24, width of pleuron of second abdominal segment 8 mm.

DESCRIPTION: Carapace: Upper margin slightly arcuate in front of cervical suture, straight behind the suture. Surface marked with numerous very short, fine raised lines having the appearance of granules. Cervical suture slightly oblique, nearly straight, very broad above the middle of the carapace, below the middle gradually diminishing, and ending at about the lower fourth of the carapace. The hepatic groove so far as it is visible occupies the middle third of the vertical distance of the carapace; it is subparallel to the cervical groove and is deeper; at its lower end it forks into two short equal branches; the anterior branch is prolonged in a shallow furrow which curves into a longitudinal direction toward the anterior angle of the carapace. Between the cervical and hepatic grooves there is a low longitudinal elevation, and one similar but higher in the same line in front of the hepatic groove; this last named swelling is bounded anteriorly by a shallow groove. A tubercle, which may have been a spine, lies a little behind and above the deepest part of the orbit. On the upper margin of the rostrum there are indications of three small spines, one at the base, one near the tip, and the other half way between.

Portions of the first four abdominal somites remain. The surface where present is smooth and punctate. The pleuron of the second somite is longer, in the direction of the axis of the body, than it is deep; it is suboval, obtusely angled at the lowest point and its surface is more or less concave. The tip of the third pleuron projects below the second and is rectangular, the angle pointing downward.

The surface of merus, carpus and palm of cheliped is rough with short transverse rugae; merus narrow, increasing in width distally; the carpus appears short and has a large spine on its upper margin. Chela very long; palm increasing in width from the proximal to the distal end; exposed surface gently rounded, without carina; fingers about as long as palm, the fixed finger narrower than the dactyl and overreaching it a little; both fingers are irregularly dentate, the dactyl has a lobe at its distal two-fifths whereas the fixed finger has a smaller lobe on either side of it. The articulation of the dactylus is concealed.

Persephona invalida, sp. nov.

TYPE: From San Diego, California; Pliocene. Carapace only. Specimen in California Academy of Sciences. Orig. No. 1413. A fragment of a smaller specimen bears the same number.

MEASUREMENTS: Extreme length of carapace 39.4, approximate width 36, height 17.5 mm.

DESCRIPTION: Fronto-orbital region horizontal and slightly advanced beyond the spherical portion of the carapace. Cardiac and intestinal regions delimited laterally, the intestinal region deeply so. The entire surface of the carapace is thickly covered with coarse conical granules varying in size,

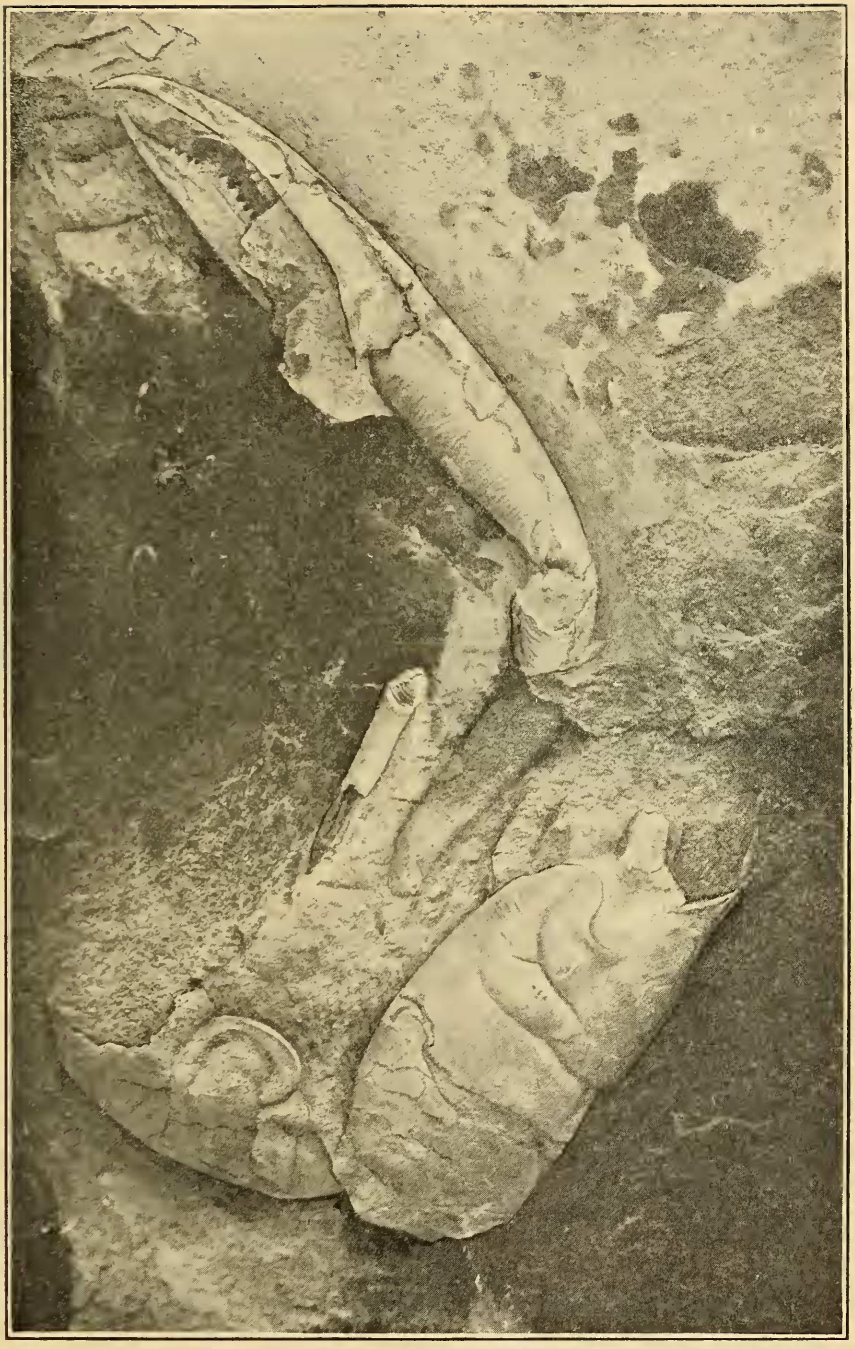

Fig. 1. *Nephrops shastensis*, holotype, side view, × 2.

the spaces between the larger ones filled with smaller ones; on the anterior quarter of the carapace the granules become progressively smaller and more crowded. The frontal teeth are broad, blunt and hood-shaped and more advanced than the outer tooth of the orbit; fronto-orbital margin granulate; two closed fissures in the upper orbit, separated by a broad, shallow lobe. The outer of these fissures is continued backward in a broad, shallow depression which partially defines the hepatic region. Still further back on the right side may be seen the marginal hepatic angle. Posterior margin of carapace incomplete and obscure; no intestinal median spine; there may be a spine at the outer end of the posterior margin but it cannot be determined with certainty.

In shape and general appearance this carapace most resembles the Recent *P. punctata* (Linnaeus)[2] from the southeastern coast of North America.

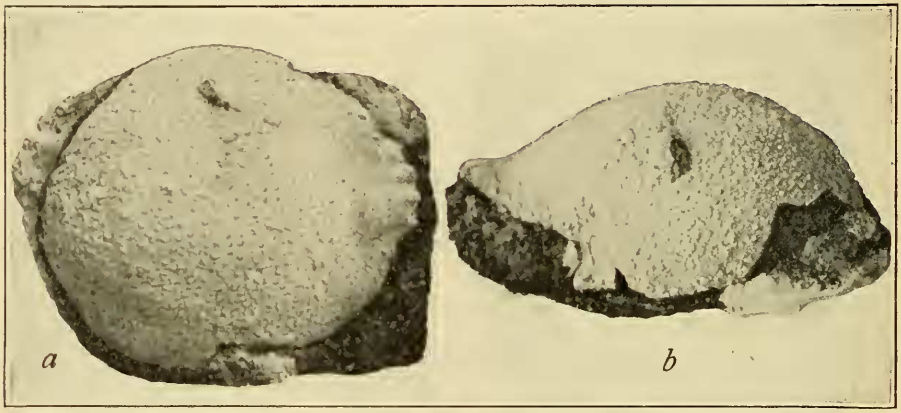

Fig. 2. *Persephona invalida*, holotype, carapace, × about 1¼.
a. Dorsal view. *b*. Left profile.

BOTANY.—*On the names of certain species of* Deguelia (Derris).[1]

S. F. Blake, Bureau of Plant Industry.

In recent years a number of species of the leguminous genus usually known as *Derris* have attracted attention as insecticides. The nomenclature of the genus as well as of some of its species is considerably involved. The present paper is the result of an attempt to determine what names certain species of the genus, discussed in a projected publication of the Bureau of Chemistry of the U. S. Department of Agriculture, should bear under the American Code of Botanical Nomenclature.

[2] *Cancer punctatus* Linnaeus. Syst. Nat., ed. 10. 1: 630. 1758. (In part.)

[1] Received November 19, 1929.